

**WHAT IS CLAIMED IS:**

1. An apparatus for fragrance sensory stimulation comprising:

5 a multimedia source comprising at least one audiovisual signal connected to an audiovisual display, and fragrance information synchronized with the audiovisual signal; a fragrance generator for processing said fragrance information into a fragrance signal; at least one fragrance control system that accepts a fragrance signal as an input, and generates a control signal and a burst of compressed gas; and a fragrance delivery system comprising a plurality of fragrance chemicals in communication with the compressed gas, whereby at least one of said fragrance chemicals is 10 volatilized and the volatilized fragrance is collected and sensed by a subject.

15 2. The apparatus for fragrance sensory stimulation according to claim 1, wherein the fragrance delivery system comprises an indexing turret containing a plurality of ports, each port containing one of said plurality of fragrance chemicals.

3. The apparatus for fragrance sensory stimulation according to claim 2, wherein the multiport valve contains an absorbent material impregnated with a fragrance in each port.

20 4. The apparatus for fragrance sensory stimulation according to claim 1, wherein the delivery system comprises a miniature multiport valve.

25 5. The apparatus for fragrance sensory stimulation according to claim 1, further comprising a transmitter connected to the fragrance generator and a receiver connected to the fragrance creation system, whereby the transmitter sends the fragrance signals to the receiver.

6. The apparatus for fragrance sensory stimulation according to claim 1, wherein the fragrance control system comprises a source of compressed gas regulated by a microprocessor.

30 7. The apparatus for fragrance sensory stimulation according to claim 6, wherein the source of compressed gas is a compressor.

8. The apparatus for fragrance sensory stimulation according to claim 6, wherein the source of compressed gas is a vessel.

9. The apparatus for fragrance sensory stimulation according to claim 6, wherein the source of compressed gas contains a gas selected from the group comprising: carbon dioxide, air, nitrogen, and oxygen.

10. The apparatus for fragrance sensory stimulation according to claim 6, further comprising a high-pressure cutoff sensor.

11. The apparatus for fragrance sensory stimulation according to claim 1, wherein the short burst of pressurized gas is a burst of less than five seconds duration.

12. The apparatus for fragrance sensory stimulation according to claim 1; wherein the burst of compressed gas is followed by a purging burst of compressed gas that clears fragrance chemicals from the apparatus.

13. The apparatus for fragrance sensory stimulation according to claim 1, wherein the fragrance control system is mounted on a user's body.

20 14. The apparatus for fragrance sensory stimulation according to claim 1, wherein the fragrance control system is mounted on a chair.

25 15. The apparatus for fragrance sensory stimulation according to claim 1, wherein the fragrance delivery system is mounted on a user's body.

16. The apparatus for fragrance sensory stimulation according to claim 1, wherein the fragrance control system is mounted on a chair.

30 17. A fragrance producing system synchronized to an audiovisual medium comprising: a fragrance delivery system for providing a short burst of compressed gas containing one of a plurality of fragrance chemicals to an individual user coordinated by receiving and processing a signal contained within the audiovisual medium that has been transmitted to a fragrance creation

system in which the signal releases a burst of compressed gas that selectively volatilizes the fragrance chemical, wherein the plurality of fragrance chemicals are disposed within an apparatus that selectively mixes one of said plurality with a burst of compressed gas.

5        18.      The fragrance producing system according to claim 17, wherein the signal contained within the audiovisual medium is transmitted via an RF transmitter to an RF receiver connected to the fragrance creation system.

10        19.      The fragrance producing system according to claim 17, wherein the apparatus that selectively mixes one of said plurality with a burst of compressed gas comprises a turret with a plurality of ports, and each of said ports includes an absorbent material and a fragrance chemical.

15        20.      The fragrance producing system according to claim 17, wherein the apparatus that selectively mixes one of said plurality with a burst of pressurized gas comprises an array of micro-valves, and each of said micro-valves includes an absorbent material and a fragrance chemical.

20        21.      The fragrance producing system of claim 17, further wherein said compressed gas selectively creates a purging airflow, whereby said purging burst of compressed gas clears fragrance chemicals from the apparatus.

22.      The fragrance producing system according to claim 17, wherein the signal contained within the audiovisual medium is transmitted via an infrared transmitter to an infrared receiver connected to the fragrance creation system.

23. A method of synchronizing a fragrance stimulus to a user with one or more audio and visual stimuli, comprising the steps of:

5 providing a fragrance track to an audiovisual medium to provide a coded signal that correlates to a type of fragrance desired to be released at a pre-determined time;

determining the divisions within the medium in which fragrance is to be delivered and creating a sequence of fragrances;

10 providing a device having the requisite number of ports containing a sufficient variety and quantity of fragrance to correspond to the sequence of fragrances;

loading the device with the fragrance; and

15 providing a signal that is processed to activate a source of compressed gas and connect the device with a burst of compressed gas that the correct fragrance chemical is volatilized when a burst of air reaches the fragrance chemical.

24. The method according to claim 23, wherein the step of providing a fragrance track comprises programmatic methods directing the system to generate a scent for a pre-determined brief period of time.

25. The method according to claim 23, wherein the step of connecting the device with a burst of compressed gas comprises indexing a turret.

20 26. The method according to claim 23, wherein the step of connecting the device with a burst of compressed gas comprises actuating one of an array of valves.

27. The method according to claim 23, further comprising the step of providing a signal to 25 activate the source of compressed gas to purge any fragrance chemical within the device.